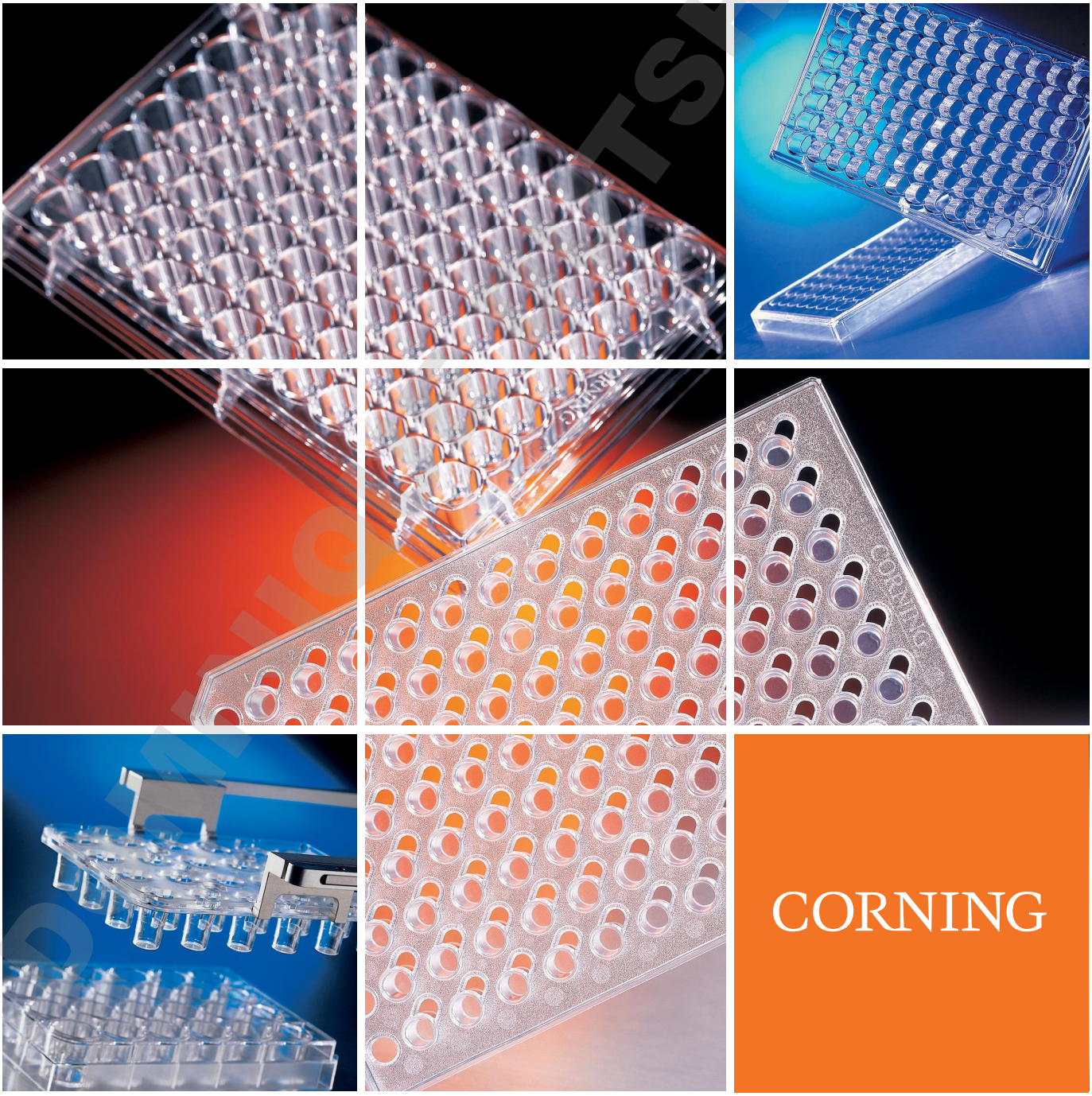
Transwell® Permeable Supports



CORNING

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Transwell® Permeable Supports

Transwell cell culture inserts are convenient, sterile, easy-to-use permeable support devices for the study of both anchorage-dependent and anchorage-independent cell lines.

- Designed to produce a cell culture environment that closely resembles the in vivo state
- Allows polarized cells to feed basolaterally and thereby carry out metabolic activities in a more natural fashion
- Unique self-centered hanging design prevents medium wicking between the insert and outer well
- Permits access to the lower compartment through windows in the insert wall
- Suspended design allows for undamaged co-culturing of cells in the lower compartment
- Available in a range of pore sizes and different membranes to satisfy diverse experimental requirements

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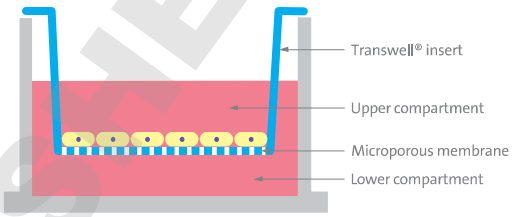
Transwell® Permeable Supports

Characteristics of Transwell Membranes

Characteristics	Polyester (PET)	Polycarbonate	PTFE/Collagen
Optical properties	Clear	Translucent	Clear when wet
Cell visibility	Good	Poor	Cell outlines
Tissue culture treated	Yes	Yes	No
Membrane thickness	10 µm	10 µm	50 µm
Matrix/ECM coatable	Yes	Yes	Yes
Collagen treated	No	No	Yes
Available Pore Sizes (µm)	0.4, 1.0, 3.0, 8.0	0.4, 3.0, 5.0, 8.0	0.4, 3.0

Chemical Compatibility



All of the Transwell membranes are compatible with histological fixatives including methanol and formaldehyde. The polyester Transwell membranes have the best overall chemical resistance. These membranes (but not the polystyrene housings) are compatible with many alcohols, amines, esters, ethers, ketones, oils and some solvents, including many halogenated hydrocarbons and DMSO but are not recommended for use with strong acids and bases.

Pore Density

Of the three types of Transwell membranes, only the collagen coated PTFE does not have a defined pore density because it is a tortuous path membrane. The two membranes with a nominally defined pore density are polycarbonate and polyester. The polyester Transwell membranes do not have as high a pore density as the polycarbonate Transwell but have better optical clarity as a result. The nominal pore densities for Corning® Polycarbonate and Polyester (PET) membranes are given in the following table.

Nominal Pore Densities for Transwell Polyester and Polycarbonate Membranes

	Nominal Pore Density	
Pore Size	**Polycarbonate Membrane Transwell (pores/cm²)**	**Transwell-Clear Polyester Membrane (pores/cm²)**
0.4 µm	1×10^8	4×10^6
1.0 µm	n/a	1.6×10^6
3.0 µm	2×10^6	2×10^6
5.0 µm	4×10^5	n/a
8.0 µm	1×10^5	1×10^5

Growth Areas and Recommended Medium Volumes for Transwell Permeable Supports

Transwell Insert Diameter (mm)	Insert Membrane Growth Area (cm²)	Multiple Well Plate or DishType	Volume Added per Plate Well (mL)	Volume Added to Inside of Transwell Insert (mL)
4.26	0.143	HTS 96	0.235	0.075
6.5	0.33	24 well	0.6	0.1
12	1.12	12 well	1.5	0.5
24	4.67	6 well	2.6	1.5
75	44	100 mm dish	13	9

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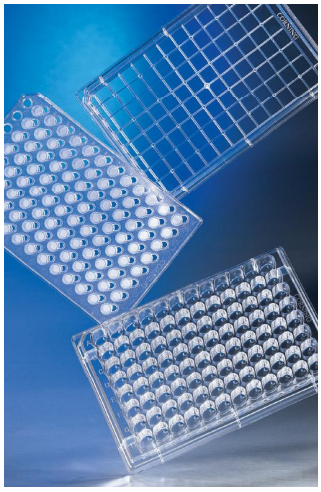
Transwell® Permeable Supports



HTS Transwell-96 System

Corning® HTS Transwell-96 Well Permeable Support Systems and Plates

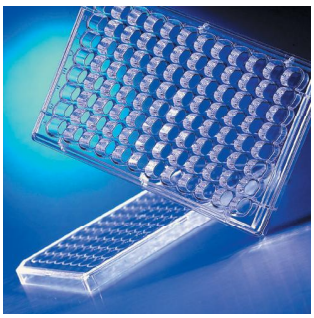
- The HTS Transwell-96 Well Permeable Support has an array of 96 wells with membrane inserts connected by a rigid, robotics-friendly tray that enables all 96 inserts to be handled as a single unit
- Cell growth area is 0.143 cm^2/well
- Choice of either polyester (PET) membrane (0.4 µm, 1.0 µm, 8.0 µm pore sizes) or polycarbonate (PC) membrane (0.4 µm, 3.0 µm, 5.0 µm pore sizes)
- Large apical and basolateral access ports allow efficient media sampling and facilitate automated or manual access
- Optimized for automation, improved gripping surface, and standard bar codes
- The untreated reservoir plate allows for simultaneous feeding of 96 wells and comes with a removable media stabilizer to reduce the risk of spills during handling
- The tissue culture-treated receiver plate isolates each well to enable 96 individual assays
- The HTS Transwell-96 Systems (0.4 µm PC and 1.0 µm PET) are packaged with the 96 well insert plate in a reservoir plate and includes the 96 well receiver plate with lid.
- The HTS Transwell-96 Well Plates (3.0 and 5.0 µm PC, 8.0 µm PET) are packaged with the 96 well insert plate in the 96 well receiver plate with lid. Reservoir plates may be purchased separately.

HTS Transwell-96 Well Permeable Supports Ordering Information

Cat. No.	Description	Membrane Pore Size (µm)	Membrane	Qty/Pk	Qty/Cs
3381	HTS Transwell-96 System, reservoir and receiver plates with 2 lids	0.4	PC	1	1
3391	HTS Transwell-96 System, reservoir and receiver plates with 2 lids	0.4	PC	1	5
3380	HTS Transwell-96 System, reservoir and receiver plates with 2 lids	1.0	PET	1	1
3392	HTS Transwell-96 System, reservoir and receiver plates with 2 lids	1.0	PET	1	5
3385	HTS-Transwell-96 Well Plate, receiver plate and lid, individual	3.0	PC	1	2
3386	HTS-Transwell-96 Well Plate, receiver plate and lid, bulk	3.0	PC	4	8
3387	HTS-Transwell-96 Well Plate, receiver plate and lid, bulk	5.0	PC	4	8
3388	HTS-Transwell-96 Well Plate, receiver plate and lid, individual	5.0	PC	1	2
3374	HTS-Transwell-96 Well Plate, receiver plate and lid, individual	8.0	PET	1	2
3384	HTS-Transwell-96 Well Plate, receiver plate and lid, bulk	8.0	PET	4	8
3382	HTS Transwell-96 receiver plate with lid	n/a	n/a	10	10
3383	HTS Transwell-96 reservoir plate media stabilizer and lid	n/a	n/a	10	10
New 3583	HTS Transwell-96 black receiver plate with lid	n/a	n/a	10	10
3783	HTS-Transwell-96 white receiver plate and lid	n/a	n/a	10	10

HTS Transwell-96 White Receiver Plate

HTS Transwell-96 Reservoir Plate



HTS Transwell-96 Receiver Plate

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Transwell® Permeable Supports

HTS Transwell-24 Well Permeable Support

Corning HTS Transwell-24 Well Permeable Supports

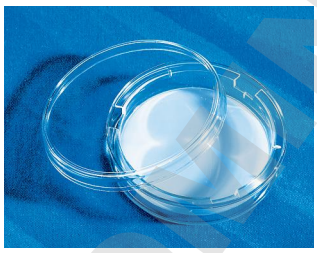
- The HTS Transwell-24 Well Permeable Support has an array of 24 wells with membrane inserts connected by a rigid, robotics-friendly tray that enables all 24 Transwell inserts to be handled as a single unit
- Cell growth area is 0.33 cm^2/well
- Choice of either polyester (PET) membrane (0.4 µm pore size) or polycarbonate (PC) membrane (0.4 µm, 3.0 µm pore sizes)
- Treated for optimal cell attachment
- Individual pack has 2 HTS Transwell-24 units loaded into 24 well plates and two open reservoirs
- Bulk pack has 12 HTS Transwell-24 units loaded into 24 well plates only. Reservoirs may be purchased separately

HTS Transwell-24 Well Permeable Supports Ordering Information

Cat. No.	Description	Membrane Pore Size (µm)	Membrane	Qty/Pk	Plates/Cs
3396	HTS Transwell-24, individual	0.4	PC	1	2
3397	HTS Transwell-24, bulk	0.4	PC	12	12
3398	HTS Transwell-24, individual	3.0	PC	1	2
3399	HTS Transwell-24, bulk	3.0	PC	12	12
3395	HTS Transwell nontreated reservoir	n/a	n/a	12	48
3378	HTS Transwell-24, bulk	0.4	PET	12	12
3379	HTS Transwell-24, individual	0.4	PET	1	2

Transwell Polycarbonate Membrane Insert

3401 12 mm Polycarbonate Transwell Insert



3419 75 mm Polycarbonate Transwell Insert

- 10 µm thick translucent membrane
- Pore sizes ranging from 0.4 µm to 8 µm diameters
- Tissue culture treated for optimal cell attachment
- Membrane must be stained for cell visibility

Transwell Polycarbonate Membrane Permeable Support Ordering Information

Cat. No.	Membrane Diameter (mm)	Growth Surface Area (cm^2)	Membrane Pore Size (µm)	Multiple Well Plate	Inner Packaging	Inserts/ Cs
3413	6.5	0.33	0.4	24 well	12/plate*	48
3415	6.5	0.33	3.0	24 well	12/plate*	48
3421	6.5	0.33	5.0	24 well	12/plate*,**	48
3422	6.5	0.33	8.0	24 well	12/plate*,**	48
3401	12	1.12	0.4	12 well	12/plate	48
3402	12	1.12	3.0	12 well	12/plate	48
3412	24	4.67	0.4	6 well	6/plate	24
3414	24	4.67	3.0	6 well	6/plate	24
3428	24	4.67	8.0	6 well	6/plate	24
3419	75	44	0.4	–	1/dish	12
3420	75	44	3.0	–	1/dish	12

*6.5 mm membrane diameter are packaged 12 inserts in a 24 well plate, 4 plates per case.
**3421 and 3422 are 12 µm thick.

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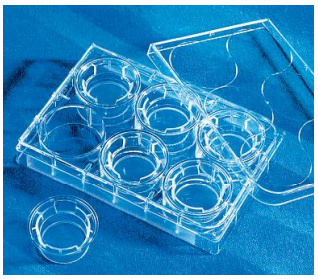
Transwell® Permeable Supports



3450 24 mm Transwell-Clear Insert

Transwell-Clear Polyester Membrane Insert

- 10 µm thick transparent membrane
- Tissue culture treated for optimal cell attachment
- Excellent cell visibility with phase contrast microscopy

Transwell-Clear Insert Ordering Information

Cat. No.	Membrane Diameter (mm)	Growth Surface Area (cm²)	Pore Size (µm)	Multiple Well Plate	Inner Packaging*	Inserts/ Cs
3450	24	4.67	0.4	6 well	6/plate	24
3452	24	4.67	3.0	6 well	6/plate	24
3460	12	1.12	0.4	12 well	12/plate	48
3462	12	1.12	3.0	12 well	12/plate	48
3470	6.5	0.33	0.4	24 well	12/plate*	48
3472	6.5	0.33	3.0	24 well	12/plate*	48
New 3464	6.5	0.33	8.0	24 well	12/plate*	48

*6.5 mm membrane diameter are packaged 12 inserts in a 24 well plate, 4 plates per case.

3491 24 mm Transwell-COL Collagen-Coated Insert

Transwell-COL Collagen-Coated Membrane Insert

- Transparent PTFE membrane coated with type I and III collagen
- Promotes cell attachment and spreading
- Inserts are individually packaged

Transwell-COL Insert Ordering Information

Cat. No.	Membrane Diameter (mm)	Growth Surface Area (cm²)	Membrane Pore Size (µm)	Multiple Well Plate	Inserts/Cs
3491	24	4.67	0.4	6 well	24
3492	24	4.67	3.0	6 well	24
3493	12	1.12	0.4	12 well	24
3494	12	1.12	3.0	12 well	24
3495*	6.5	0.33	0.4	24 well	24
3496*	6.5	0.33	3.0	24 well	24

*Includes twenty-four 6.5 mm inserts packaged separately with two 24 well plates.

3407 12 mm Snapwell Inserts

Snapwell™ Inserts

- A modified Transwell permeable support containing a 12 mm diameter membrane supported by a detachable ring
- Once cells are grown to confluence on the Snapwell insert, the ring can be placed in a vertical or horizontal diffusion chamber*
- Packaged in 6 well plates

Snapwell Insert Ordering Information

Cat. No.	Membrane Pore Size (µm)	Membrane	Inner Packaging	Inserts/Cs
3407	0.4	Polycarbonate	6/plate	24
3801	0.4	Clear Polyester	6/plate	24

*Diffusion Chambers are available through Harvard Apparatus (www.harvardapparatus.com)

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Transwell® Permeable Supports

Netwell Inserts

Netwell™ Inserts and Accessories

- Costar® Netwell inserts have polyester mesh bottoms attached to polystyrene inserts
- They are used as tissue carriers, supports and strainers for culture of small organs, tissue slices or explants at the air-media interface
- Handy carrier for immunocytochemical staining of tissue slices (see accessories below)
- Provides coarse filtration of tissue homogenates, cell suspensions and microcarriers
- Available in two mesh sizes and diameters
- Preloaded in 6- or 12-well microplates
- 24 mm Netwell inserts fit in Corning 50 mL plastic centrifuge tubes

Netwell Inserts Ordering Information

Cat. No.	Diameter (mm)	Polyester Membrane Mesh Size (µm)	Color	Inner Packaging	Qty/Cs
3477	15	74	n/a	12/plate	48
3478	15	440	n/a	12/plate	48
3479	24	74	n/a	6/plate	48
3480	24	440	n/a	6/plate	48

Netwell Accessories

Netwell Accessories

- Specially designed Netwell carriers and handles allow simultaneous processing of up to 12 samples per carrier
- Polystyrene reagent trays are available in white for colorimetric reaction contrast, or black for better visibility of tissue sections
- Each carrier kit contains eight carriers and eight handles

Netwell Accessories Ordering Information

Cat. No.	Description	Qty/Cs
3517	Netwell Reagent Tray, black	200
3519	Netwell Reagent Tray, white	200
3520	Netwell Carrier Kit, 15 mm	8
3521	Netwell Carrier Kit, 24 mm	8

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